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ABSTRACT

This paper focuses on using a systems approach to develop supervisory conference strategies to be tested in constructed and controlled teaching-supervisory situations. This involves identifying performance objectives through a functional analysis of teaching and analyzing the interacting and interdependent variables. It is then necessary to develop alternative procedures and identify supervisory behaviors and strategies which consider the above variables by selecting relevant elements from teaching, training research, counseling, learning theory, and other disciplines and combining them into comprehensive strategies based on a sequence of critical decision points. The results provide the practicing supervisor with a research basis for conducting conferences with teachers. (The paper contains a flow chart and model of a suggested supervisory conference strategy.) (RT)

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USING A SYSTEMS APPROACH
TO DEVELOP AND RESEARCH
SUPERVISORY CONFERENCE STRATEGIES

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Few would disagree that the purpose of educational supervision is the improvement of instruction and/or learning. But here is where we part company. Few agree on how, as is dramatically evidenced by practice, research, and the literature. (Leeper, 1969). A variety of fields have contributed to supervising practice. Among the more prominent are industrial supervising practices, counseling, psychiatry, behavior modification and numerous other sources. Each field has a contribution to make but it seems imperative that we "get it all together."

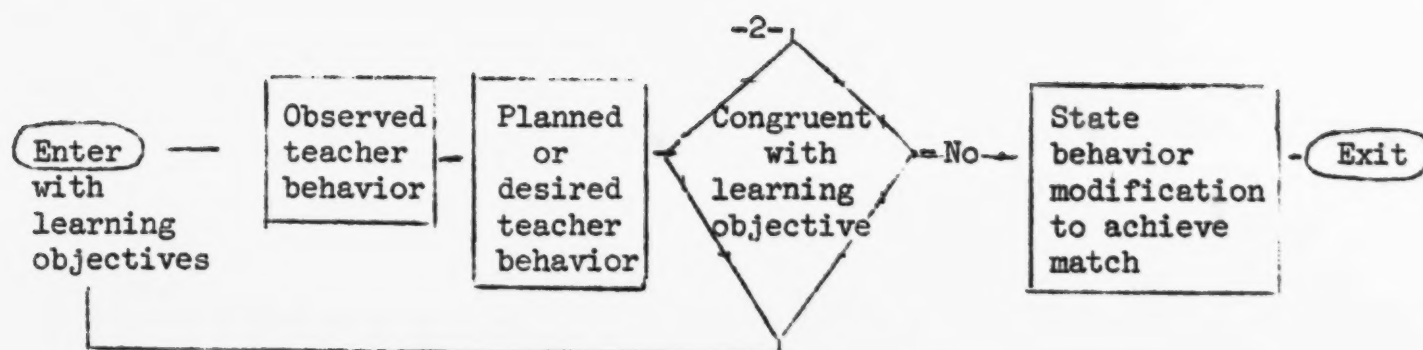
To this end we have employed a systems approach - an orderly analytic study of the supervisory process to enable the supervisor to identify a preferred course of action from among possible alternatives. A number of approaches might be taken. The following procedures have been used to develop supervisory conference strategies.

- I. Define the problem
 - 1) identify performance objectives
 - 2) identify characteristics of the supervisory conference system
 - a) constraints, uncontrollable variables
 - b) controllable variables
- II. Define sub functions
- III. Perform a task analysis
- IV. Develop alternative supervisory conference strategies using a variety of models as a filter
- V. Evaluation

The remainder of this paper will describe more specifically the procedures listed above.

I. Defining the problem

Simply stated the problem is to determine the congruence of teacher behavior/strategies with desired learning outcomes.



1) identifying performance objectives

Given the function of teaching "establishing pupil task orientation" the following list of teacher performance objective has been derived.

PERFORMANCE CRITERIA: Establishing Pupil Task Orientation

Given a lesson to introduce, present the day's activities to the class and relate the activities and the interests of the students to the objectives of the instruction. Another way of stating this is - Getting students psychologically ready to learn.

The following list is divided into four categories of teacher activities each designed to serve a specific function in orienting students to the task. The categories are somewhat arbitrary. Other items might be added to the list or shifted to different categories. In introducing a lesson or instructional sequence, a teacher should be able to choose at least one activity from each of the four categories to orient students to the learning task.

Attention - Stimulate - Activate

- Present a discrepant event or situation
- Present a common stimulus
- Present a common problem or situation
- Create cognitive dissonance
- Create competition or anxiety (caution)
- Request students to take a stand on controversial issues
- Present a variety of stimuli

Relate

- Relate to prior and subsequent instruction
- Relate to objectives of the course
- Relate to student's experiences, interests, or needs
- Present or solicit from pupils analogous situations or examples
- Establish a frame of reference

Setting Expectations

- Delineate expected roles of pupils in the instruction
- Delineate objectives or hierarchy for instruction
- Delineate the agenda for the instruction
- Delineate dimensions of the learning task

Providing Reinforcers

Provide associated reinforcers - If students succeed in a task, they will be prepared to do a subsequent task.

Provide related reinforcers - If students succeed in a task, they will be given the opportunity to do another desirable activity.

For each function of teaching a similar list is either available or can be developed.

2) Identifying characteristics of the supervisory conference system

The following matrices present a partial list: (a) facilitating and constraining characteristics of a supervisory conference and (b) the independent variables which are interacting and interdependent in a supervisory conference.

SYSTEM CHARACTERISTICS FOR SUPERVISORY CONFERENCE

-4-

SUB-SYSTEM	FACILITATING	CONSTRAINING
TEACHER'S CHARACTERISTICS	MAJORITY OF TEACHERS WISH TO IMPROVE TEACHING SKILLS. TEACHERS ARE ABOVE AVERAGE IN ABILITY AND EDUCATION.	TEACHER FATIGUE AT END OF DAY WHEN MOST CONFERENCES ARE HELD. COMPETING FAMILY RESPONSIBILITIES
SUPERVISOR'S CHARACTERISTICS	TRAINING OF SUPERVISORY PERSONNEL CAN BE ACCOMPLISHED WITHOUT LOSS OF CLASS-ROOM TIME OR SUBSTITUTE FUNDS. USUALLY HAS CONCEPTUAL MODEL OF DESIRED TEACHING BEHAVIOR. USUALLY LEVEL OF EDUCATION PREPARATION AND ABILITY IS HIGH.	SUPERVISORY LOAD AND MANAGERIAL RESPONSIBILITIES
ENVIRONMENTAL CHARACTERISTICS	AVAILABILITIES OF MODELS AND TECHNIQUES SUCH AS INTERACTION ANALYSIS, MICRO-TEACHING, STANFORD APPRAISAL GUIDES, ETC.	MECHANICAL PROBLEMS WITH VTR EQUIPMENT. TEACHER HESITANCE TO USE COMPLICATED EQUIPMENT. LACK OF ORGANIZATIONAL PLAN TO PROVIDE FEEDBACK TO TEACHERS. RANDOMNESS OF IN-SERVICE TIME
	DESIRED	ACTUAL
CURRICULUM GOALS AND EVALUATION TECHNIQUES	MODIFY TEACHER BEHAVIOR TOWARDS AN IDENTIFIED GOAL LEADS TO: IMPROVE TEACHER PERFORMANCE FROM WHERE IT CURRENTLY IS TO A POINT WHERE A STATISTICALLY SIGNIFICANT CHANGE IN PUPIL PERFORMANCE IS MEASURED	BASE LINE BEHAVIOR

SYSTEMS ANALYSIS OF A SUPERVISORY CONFERENCE
INDEPENDENT VARIABLES

Independent Variables	Internal Characteristics		External Characteristics
	Biological:	Psychological: Individual Behavior	
Teacher Subsystem	Physical/Chemical	Cognitive	Affective
	Fatigue Hunger Illness (Medication) Age and Experience Vision-Hearing Disability	Teaching experience Knowledge of child/adolescent behavior Knowledge of Learning Theory Content proficiency	Anxiety Frustration Self image Male/female attitudes Defensiveness Values
	Same	Supervision experience Knowledge of supervisory process Content background Knowledge of teaching strategies	Concept of Supervisory role Acceptance of teaching behavior Self image Desire and ability to modify such
	Confort Acoustics Lighting Time of Day Time of Year Conference Time Limit	Availability of materials of instruction Extent of In-Service training Availability of media	Attitude toward school/administration Attitude toward Supervisor/teacher relationship
Non-Learner Subsystems		Supervisor	Colleague acceptance Cultural knowledge
Environment			Priorities of the community/district

II. Define the sub functions of a supervisory conference

It has been the writer's fortune to have the opportunity to interact with many supervisors and teachers in the past few years in a variety of situations. This interaction has contributed to the following list of sub-functions of a supervisory conference.

1. Plan teaching strategies
2. Provide encouragement to teachers
3. Provide training for the acquisition of specific teaching behavior
4. Provide for the improvement of a teacher's self concept
5. Provide teachers objective feedback on performance - to improve their accuracy of perception about their behavior
6. Develop a teachers ability to analyze his own performance without the aid of a supervisor
7. Modify a teachers behavior
8. Evaluate a teacher's performance

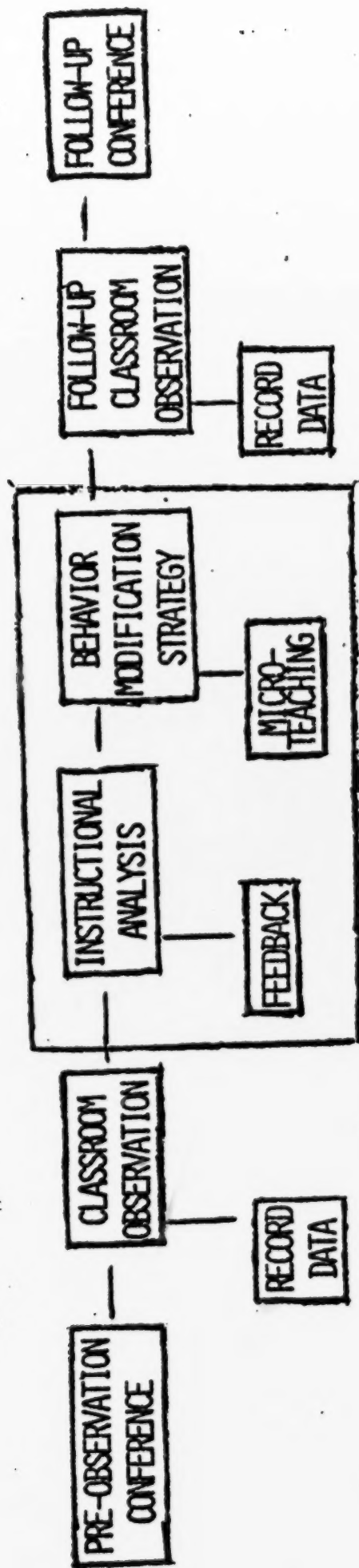
It would be presumptions to consider the list exhaustive. There are others. However these are the sub-functions this paper encompasses.

III. Perform a task analysis

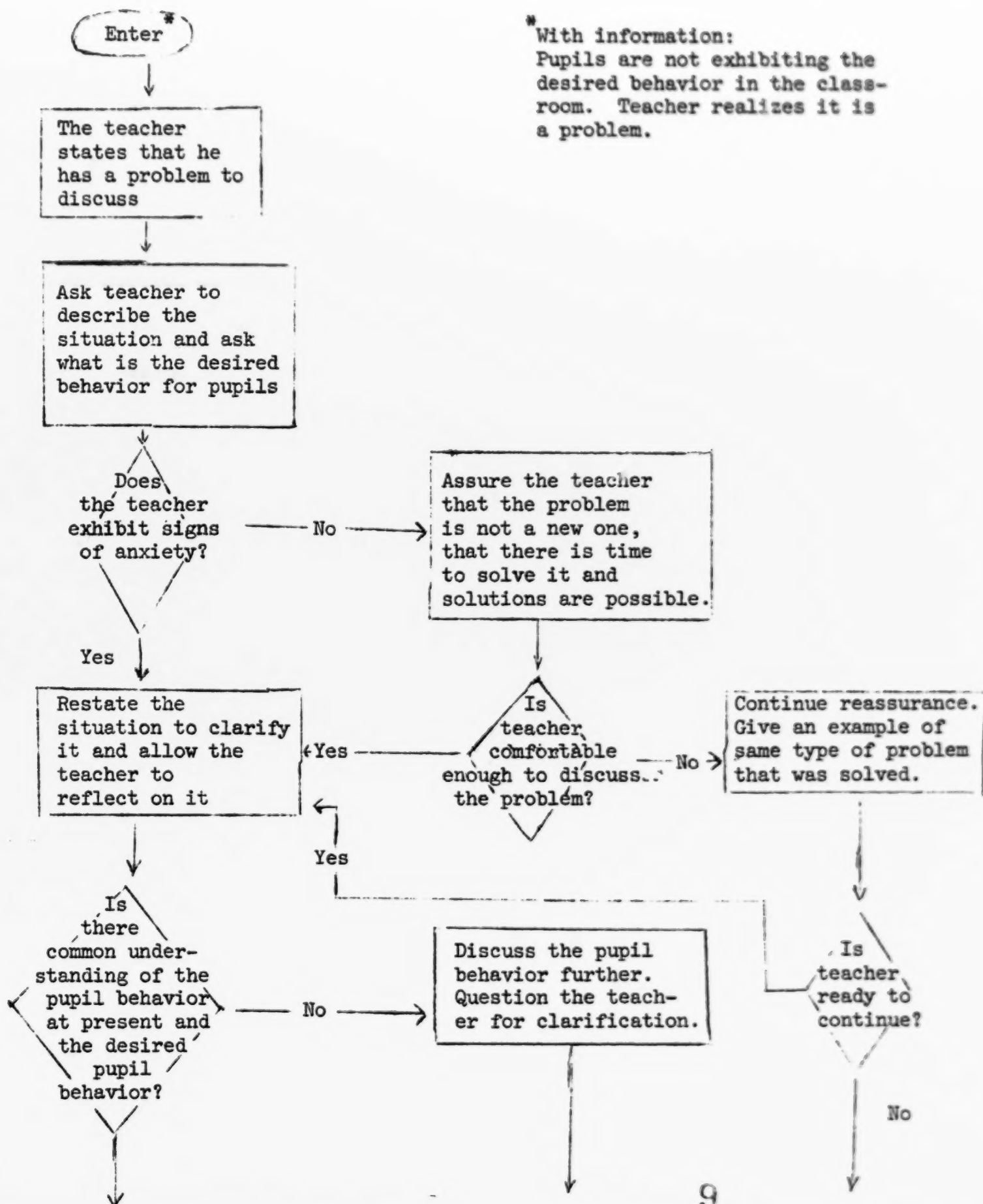
Goldhammer (1969) identified three types of supervisory conferences: pre-observation, analysis and strategy, and post conference analysis. The following diagram represents a modification of his model.

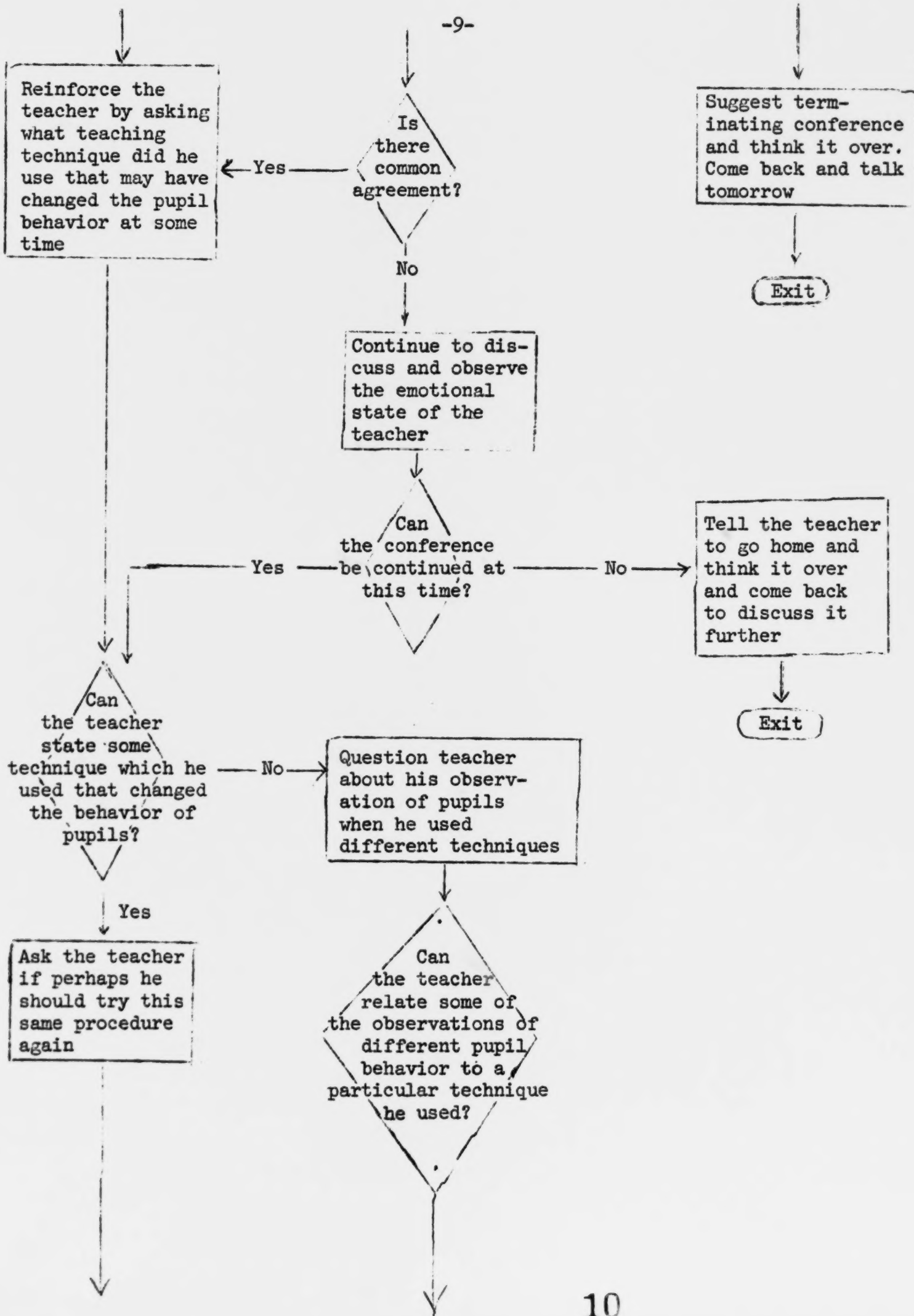
On the pages following the generic model a detailed flow chart is presented which depicts how one supervisor has identified the critical tasks in a pre-observation conference.

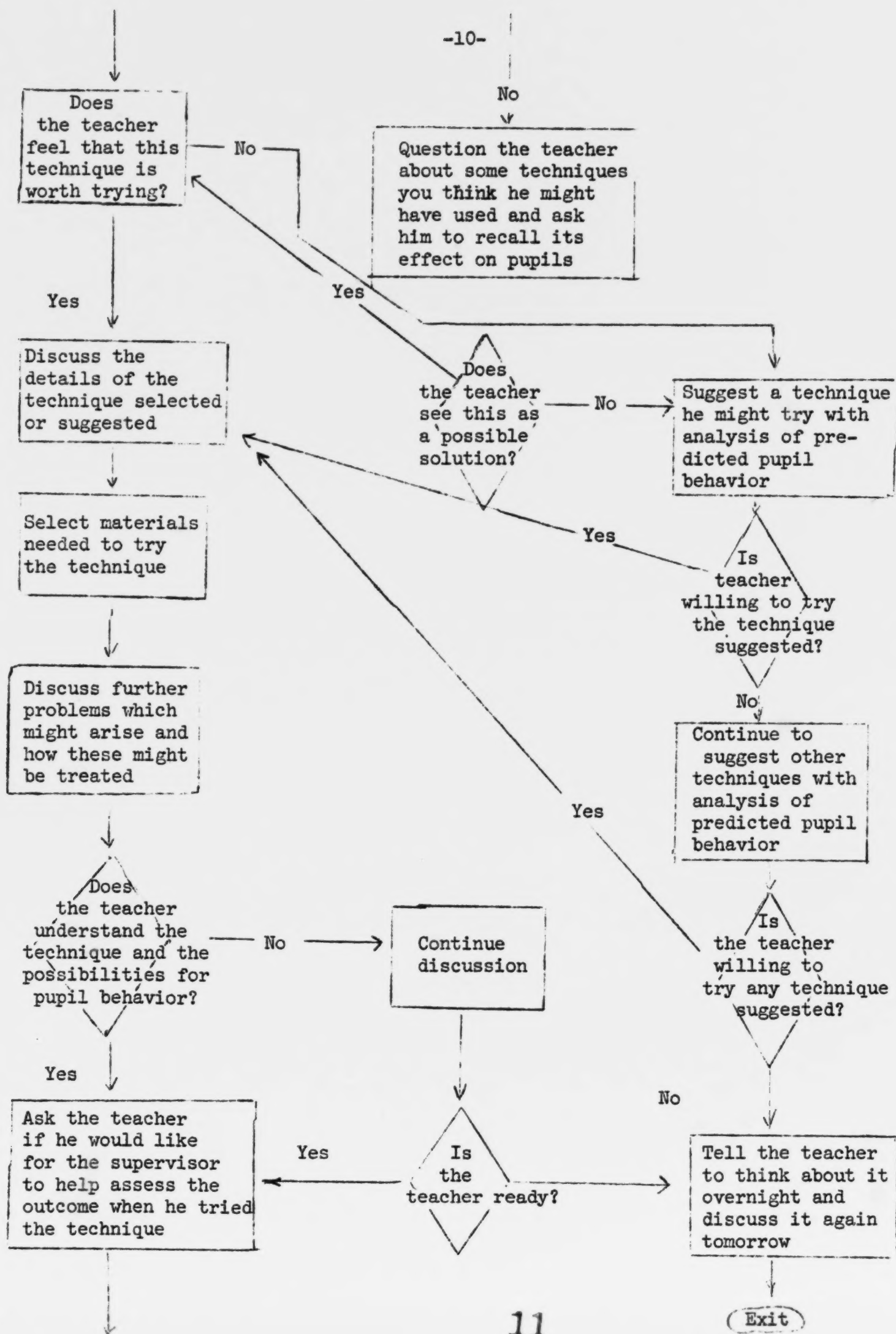
A SYSTEMS APPROACH TO INSTRUCTIONAL SUPERVISION

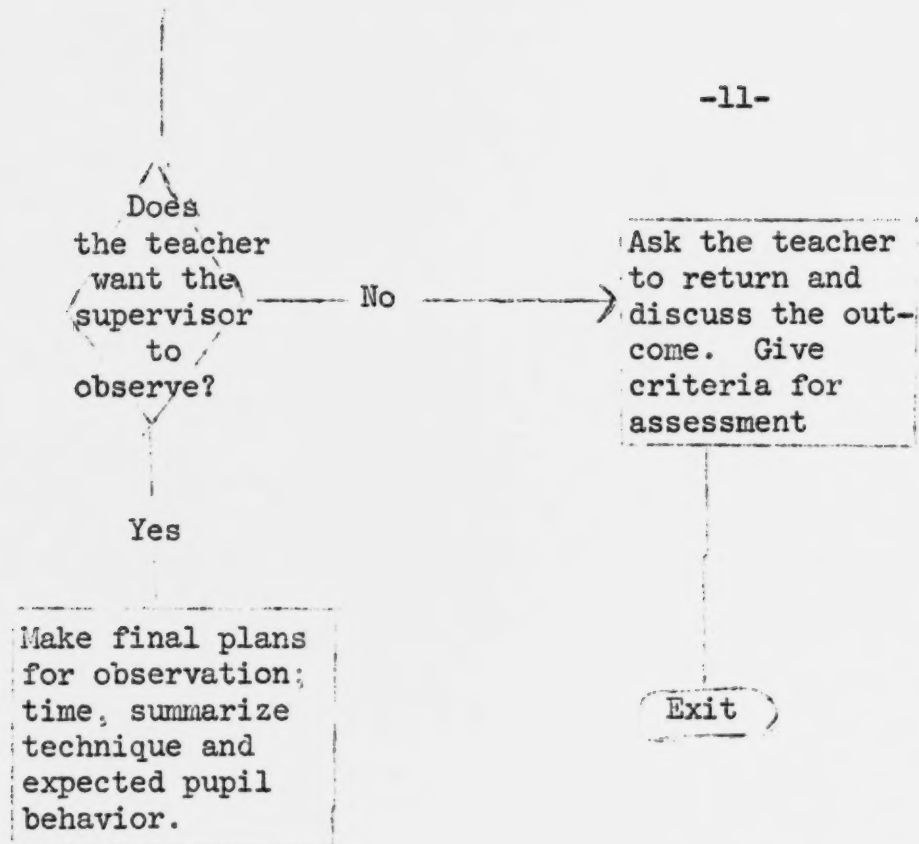


Flow Chart
Procedure For A Pre-Observation Supervisory Conference

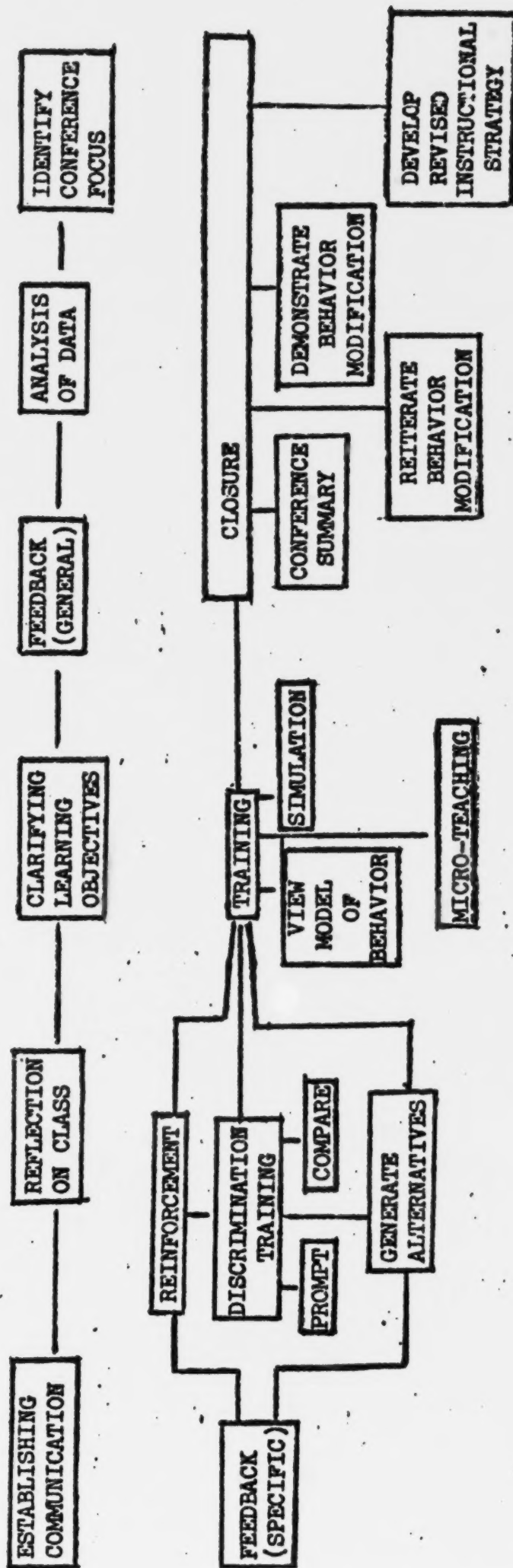








Similarly a task analysis could be performed for each type of supervisory conference. A generic model is presented on the next page for analysis-modification supervisory conference. In this example the first task was to identify general functions of the conference given a preceding classroom observation. A brief description of each function follows. . The next step would be to develop a specific task analysis as presented earlier for the pre-observation conference. Such a flow chart would be quite complicated and lengthy and will not be presented here.



A SYSTEMS APPROACH TO THE SUPERVISORY CONFERENCE

A BEHAVIOR MODIFICATION STRATEGY

Establishing Communication

For the supervisor this phase of the supervisory conference is a crucial one. He will attempt to reduce the teachers anxieties through expressions of support, confidence, and interests. Teacher and supervisor alike will adjust their communication patterns to accommodate each others "style." A more specific list of behaviors follows.

Reflection on Classroom Performance

The supervisor asks the teacher to reflect on his teaching, to recall those aspects of his teaching that went according to his plans and those that didn't. During the course of this discussion the teacher will probably identify one or two problems he thinks he encountered. The supervisor will point out that he can confirm this when he views the video tape or reviews the data gathered.

As the teacher reflects on his performance, he should be guided toward relating the course of action to the learning objectives and the affect on pupils.

Clarifying Learning Objectives

The supervisor asks the teacher to review the learning objectives for the instructional period. Using probing questions such as "Could you be more specific?" or "What, specifically, are the pupils able to do at the end of the period?" "Can you put the objective into terms of pupil behavior?" the teacher is guided to a delination of his specific objectives

During these three phases of the supervisory conference a "Rogerian counseling" model was chosen as a basis (screen) for determining essential supervisory behavior/strategy. The following behaviors have been identified as those which are functional during these phases.

SPECIFIC SUPERVISORY BEHAVIORS
FOR
ESTABLISHING COMMUNICATION
REFLECTION ON THE CLASS
CLARIFYING LEARNING OBJECTIVES

RESPONSE BEHAVIORS

ACCEPTING
REFLECTING
CLARIFYING
SUMMARY CLARIFICATION
PROBING
SILENCE

INITIATING BEHAVIORS

ASSURANCE
APPROVAL
INCOMPLETE THOUGHT
QUESTIONS - (THOUGHT LEVEL)
PERCEIVING
PATTERNING
REDEFINING
PREDICTING
ANALYSIS

The foregoing list should serve to illustrate the process. The following phase will be described in general terms without an accompanying list of specific supervisory behaviors.

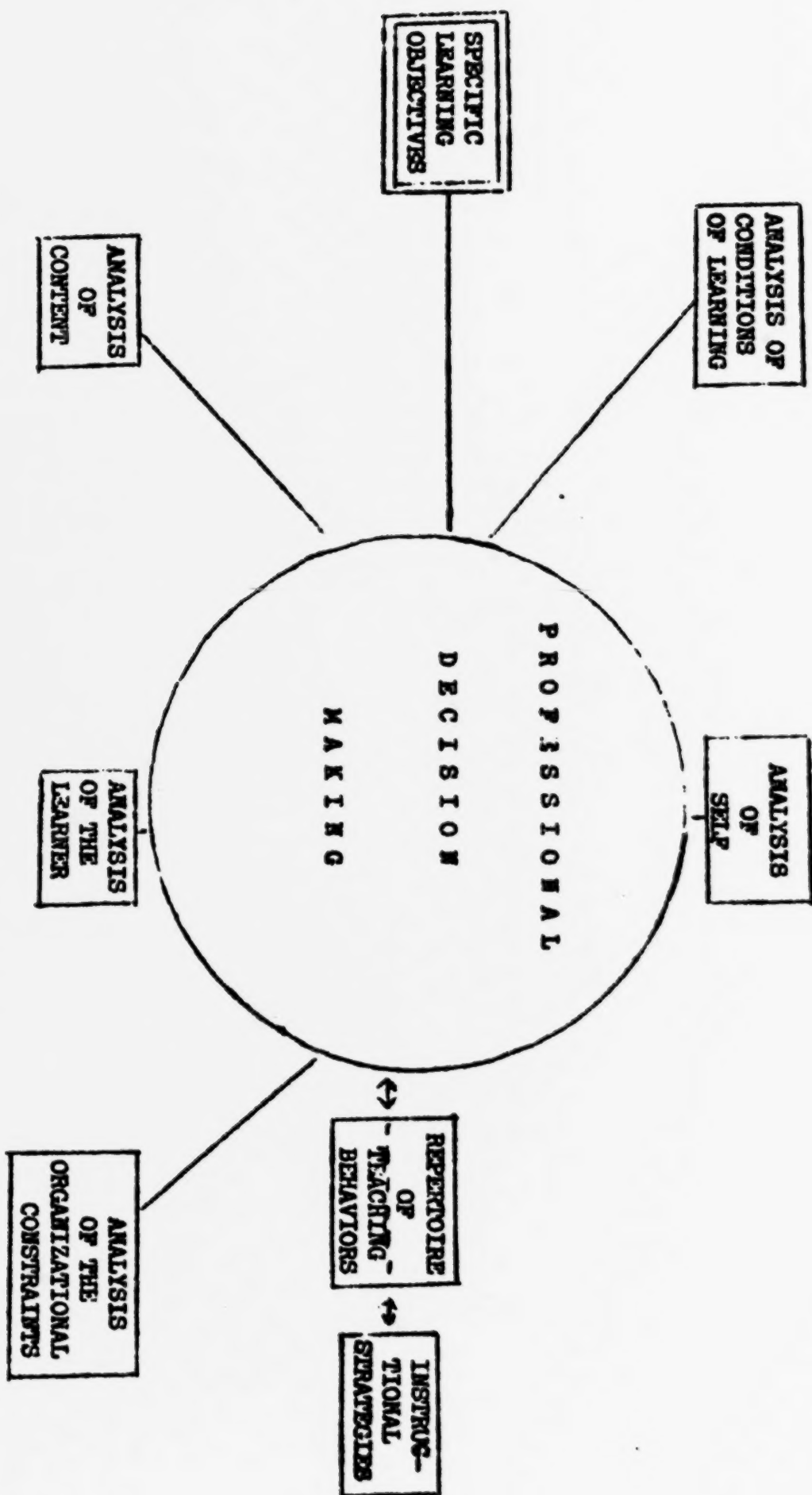
Feedback

The supervisor provides objective feedback to the teacher. This feedback may be in the form of a graphic summary of selected aspects of teacher-pupil behavior and/or patterns of teaching. Although video and audio tape provides feedback, it is fleeting and is probably best used as a training procedure.

Analysis of Data

Given the data recorded during the observation the supervisor engages the teacher in an analysis of his performance in terms of the stated learning objectives. Five areas of analysis are discussed below.

ANALYZING TEACHING



Analysis of Self

A teacher must be able to identify clearly his own psychological, sociological, and cultural orientation, and he must recognize traits and peculiarities of his own personality, for each of these factors will affect not only his planning of teaching strategies but also their implementation in the classroom.

Analysis of the Learner

Each pupil is unique in his ability to learn, his repertoire of experience, his socio-economic and cultural background, and his psychological and physiological makeup. Thus, a teacher's instructional strategies should be flexible and comprehensive enough to facilitate learning for each individual pupil.

Analysis of Content

The inherent nature or structure of each subject matter area includes both elements unique to that subject area and elements in common with other subject areas. In the process of planning instructional strategies, the teacher needs to analyze specific content to determine what is unique within it and what is shared with other disciplines or bodies of knowledge. Such analysis is vital particularly to the establishment of specific goals and the selection of pertinent behaviors to achieve them.

Analysis of Conditions of Learning

Certain conditions of learning external to the learner need to be recognized and considered: prerequisite concepts, facts, or skills; requirements for retention; specific stimuli for subsequent learning; opportunities for generalization of knowledge and transfer of learning.

Analysis of Organizational Constraints

In each instructional situation the facilities, materials and equipment, human and financial resources, community mores, etc. impose certain constraints on teaching. These constraints must be analyzed and considered in the development of instructional strategies.

The following example^{*} is presented to illustrate the foregoing discussion. A teacher's objective is to develop in students the ability to form the capital letter G. He may first analyze the conditions for learning a psychomotor skill. He chooses to induce imitation of what is demonstrated by assuming the role of a prestigious model with whom the pupil identifies. Making this choice he may have rejected the cognitive restructuring approach as not appropriate, his objective was not to develop a rationale and the conditioning approach since it would entail a highly inefficient kind of gradual approximation to the desired behavior.

Studies on modeling^{*} indicate that learning through imitation is affected by various factors such as the rewards given the learner, the degree of exaggeration, etc. The implications are that to effect learning the model behavior must be exaggerated and provide for either direct or vicarious rewards by the learner. The person presenting the model must be one whom the student can identify with. In addition, there must be provision for practice by the student. Certain conditions are also important to such practice.

The reader is no doubt aware of someone who is left handed, who writes by positioning his hand at the top of the page so that he is writing upside down.

^{*}Gage, N. L., "Theories of Teaching," Fifty-Ninth Yearbook, Chapter XI National Society Study of Education, University of Chicago Press, 1964.

Bandura, Albert. "Influence of Models' Reinforcement Contingencies on the Acquisition of Imitative Responses." Journal of Personality and Social Psychology 1: 589-95; June 1965.

He is probably writing this way because when learning to write he was required to orient his papers the same way as his right hand classmates. An analysis of all learners would reveal that different traits do exist and have implication for teaching strategy.

When analyzing himself the teacher will realize that he can only present either a right or left hand model and needs to compensate by having another person model the other model. This example is somewhat simplistic. A further analysis of the learner and teacher might reveal incongruities in cultural-value orientations, differences in race, age, etc. which may restrict communication (in the present example identification) and consequently have strong implications for strategy.

An analysis of the content in the present case does not have special implications for strategy. One might proceed the same way if his objective were to teach a student to hold a hammer or to iron a lace blouse.

An analysis of the organizational constraints might reveal that the chalkboard is on the north wall, the seats are bolted to the floor facing the south wall, at this hour the sun shines intensely in the drapeless window on the east side and the overhead projector has been scheduled. Implications for strategy are complex but our resourceful teacher chooses to video tape the demonstration and place the monitor for viewing on the south side of the classroom.

With the establishment of learning objectives, then, and the five-fold analysis of self, learner, content, conditions for learning and organizational constraints it remains for the teacher to examine his repertoire of teaching behaviors to determine if he has the skills necessary to implement the instructional strategy he has developed. If a teacher finds that he does not have

the skills best suited for implementing the particular strategy he is developing, of course, he will need to determine alternatives to his plan, or modify the one he has tentatively drawn up, or acquire the skills which he needs to perform effectively within the plan.

Identify conference focus

With the analysis completed, the conference agenda can now be determined. For example, a teacher determines from the analysis that he should modify his response pattern to encourage discussion. The remainder of the conference would focus on teacher responding behavior.

Feedback (Specific)

Using the present example the next phase of the conference consists of reviewing the data on the teacher's response patterns in the classroom. The supervisor then guides the teacher in determining specific teaching behaviors he needs to acquire and/or refine to implement the prescribed strategy.

After the behaviors are identified, a training protocol is determined (prescribed) by the supervisor.

Training

During this part of the conference, the supervisor teaches the teacher the specified teaching behavior and how to incorporate it in his instruction. The training is provided in the following ways:

(a) The supervisor views a video tape of the teacher's performance with him. As the tape progresses, the supervisor reinforces the teacher each time he uses the selected behavior or its approximation. The supervisor can either talk over the tape or stop it for increased emphasis. He can also replay certain sections repeatedly. Specifically, the supervisor might say, "Note how many pupils responded to your question this time." "Note how much more analytical that response was."

(b) The supervisor selects several instances when the teacher used the specified teacher behavior and asks him to compare and contrast the result of his behavior in each instance. The teacher should also be asked to compare and contrast his responses (behavior) to various cues of the pupils.

(c) The supervisor prompts the teacher by pointing out, as the tape progresses, where he can incorporate the specified behavior into his instruction. One technique used is to stop the tape and ask the teacher, "What would you do at this point?" or "How would you respond in this situation?" Another training alternative is to show the teacher a specific teaching behavior.

The efficacy of two basic kinds of modeling has been investigated. These two basic kinds of modeling are perceptual and symbolic. A perceptual model in teacher education refers to a video-taped teaching episode which exaggerates a specific teaching behavior. A model is a constructed teaching-learning situation in a micro-teaching format.

To prepare a perceptual model, a teacher or teacher educator selects a topic and prepares a 15-minute lesson which lends itself to the teaching skill (behavior) to be modeled. The lesson is taught and retaught several times to different groups (normally 4-5 in number), on each occasion attempting to eliminate as many distracting stimuli (behaviors other than the one being modeled) as possible. The final modeled performance is usually 5-7 minutes in length.

A constructed model should be contrasted with the more common practice of demonstration teaching. In demonstration teaching, a competent teacher is selected and his "total" teaching performance recorded in his regular classroom.

Let us assume that the purpose for using this "demonstration" video tape is to show how a teacher questions. In an average classroom a teacher uses a variety of teaching methods, all of which might be considered exemplary. However, a person viewing this teacher's performance may be distracted from the skill of questioning by the multiple stimuli (teaching behavior) presented him and attend to other behavioral cues. Although such cues may be viable and valid, they may interfere with the task at hand.

A symbolic model is a written description of the specific teaching behavior to be acquired by the teacher. The description is detailed and includes a rationale for using the behavior.

Both the perceptual and symbolic models described here have served as the basic format for the modeling studies in teacher education.

Micro-teaching, simulation and role playing are a viable part of the supervisory conference training phase. Micro-teaching, provides direct training with teaching alternatives with a limited number of students in a teach-reteach format.

Micro-teaching is real teaching which is scaled down both in time and size of class. A micro-teaching sequence consists of preparing and teaching a 5-20 minute lesson to 1-5 students. The students are of the same age, ability, etc. that he normally teaches. Immediately following this initial teaching session, the teacher reviews his performance. He may make a self-evaluation or invite his colleagues, to join him in a discussion of the lesson.

Following the conference, the same lesson is taught to a different group of pupils. The teacher can now make an immediate assessment of revised or different teaching strategies.

The micro-teaching sequence proves most effective when one or two teaching techniques are selected for emphasis.

For example, a teach-conference-reteach sequence might focus on the verbal behavior of a teacher in a "student-centered" small-group discussion or the inductive questioning technique in a student's self-discovery of a scientific principle.

Provide closure

The conference is concluded by obtaining the teacher's commitment to practice the new behavior.

- (a) The supervisor summarizes the points made by the teacher during the conference.
- (b) The supervisor summarizes and reinforces instances in the initial teaching when the teacher used the selected teacher behavior.
- (c) The supervisor constructs a simulated situation and asks the teacher to respond to it.
- (d) The supervisor asks the teacher to delineate how he will incorporate the new behavior into his next teaching encounter.

Summary

The intent has not been to present the way to conduct a supervisory conference. A process of deriving a strategy has been presented. Such a format provides the supervisor and/or researcher a means for analyzing the supervisory conference and identifying specific functional phases. By manipulating variables/strategies in each phase one can investigate their relative effectiveness.

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